

Remarks

Claims 43-52 and 54 remain in consideration for this application, with claims 43 and 49 being in independent format. Claims 43, 46, 49, 51, 52, and 52 are currently amended; claims 1-33 have been withdrawn; and claims 34-42 and 53 have been cancelled.

This Supplementary Amendment is being submitted in order to provide further arguments and a declaration from one of skill in the art to address the rejections of the Office Action dated May 27, 2010. A Response and RCE were previously filed on October 27, 2010. Accordingly, Applicants respectfully request consideration of this Supplementary Response together with the previously filed Response.

To begin, this Supplementary Response is accompanied with a declaration from one of skill in the art for FISH. The declaration addresses the rejection of claims 43 and 45-47 under 35 USC 103(a) for allegedly being unpatentable over Knight (A) in view of Boyle, was maintained. It was alleged in the Office Action that Knight (A) taught a method of fluorescence in situ hybridization (FISH) on interphase chromosomes and taught that the probes were labeled and detected. It was further alleged that Knight taught that the distance from the terminal nucleic acid was as little as 268-296 kb for 6ptel48. Knight was alleged to have taught a method for detecting cytogenetic abnormalities using a plurality of probes within 600 kb of the terminal nucleotide of the chromosome.

To begin, Applicants have amended the claims of the present invention to more clearly recite that the probes are single copy human DNA probes. As set forth in the declaration, those of skill in the art would know that the probes in Knight (A) contain

repeat sequences and are therefore not “single copy” as required by the present claims. As evidence of why those of skill in the art would know that the BAC probes of Knight (A) would contain repeat sequences, the declaration notes that CoT-1 DNA, a well known suppressor of non-specific binding of probes to repeat sequences, was used by Knight (A). Further, when the declarant analyzed the adjacent sequences of the STS, it was impossible to obtain a single copy probe therefrom. Accordingly, as set forth in the declaration, the probes of Knight (A) fail to meet the limitation that they be “single copy.” The declaration also concludes that, for the same reason as provided above for the BAC probes, the PAC and P1 probes of Knight (A) would also contain repeat sequences. Boyle does not provide a suggestion or any motivation to use single copy probes as required by the present claims. For all of these reasons, Applicants respectfully assert that this rejection has been overcome.

With respect to the rejection of claims 44, 48, 49-52 and 54 under 35 USC 103(a) as allegedly being unpatentable over Knight (A) and Boyle in view of Knight (B), it was alleged that Knight (B) taught chromosomal rearrangements involving the telomeres of the chromosomes were emerging as an important cause of human genetic diseases and it was possible to screen for telomeric rearrangements using FISH.

Knight (A) in view of Boyle is discussed above. Knight (B) also uses BAC, PAC, and P1 clones as probes which are artificial DNA from *E. coli*. Furthermore, as explained above and in the declaration, those of skill in the art would know that the BAC, PAC, and P1 clones would contain repetitive sequences. Claims 44 and 48 depend from claim 43, discussed above, and therefore include the limitation that the probes are single copy. Independent claim 49 also includes the single copy limitation.

It cannot be said that the use of probes that include repeat sequences would disclose, teach, or suggest using single copy probes as required by the present invention. Accordingly, Applicants assert that this rejection has been overcome.

In view of the foregoing, it is respectfully submitted that all rejections have been overcome and that the claims as they now stand are patentable over the art of record and a Notice of Allowance appears to be in order and is courteously solicited.

Any additional fee due in connection with this amendment should be charged against Deposit Account No. 50-1662.

Respectfully Submitted,

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